

CLAIMS

What is claimed is:

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1. A method for underfilling an electronic chip mounted on a substrate, said method comprising:

- a. dispensing underfill on said substrate
- b. dipping said chip in a tacky thermosettable flux that does
- 10 not contain filler to create a dipped chip,
- c. placing said dipped chip on said substrate covered with underfill,
- d. soldering said dipped chip to said substrate, and
- e. curing said underfill.

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2. The method of claim 1 in which all or some of said steps are performed by a machine.

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3. The method of claim 1 in which all or some of said steps are performed manually.

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4. The method of claim 1 wherein said underfill is filled.

5. The method of claim 1 wherein said underfill is not filled.

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6. The method of claim 1 wherein said flux has a viscosity approximately 1 - 100,000 times greater than that of said underfill.

7. The method of claim 6 wherein said flux has a viscosity 1 -
100 times greater than that of said underfill.

8. The method of claim 7 wherein said flux has a viscosity 3 -
5 60 times greater than that of said underfill.

9. The method of claim 1 wherein said steps a and b are
reversed.

10 10. The method of claim 1 wherein said steps d and e are
conducted simultaneously.

11. A process for connecting an integrated circuit chip to a
substrate comprising

- 15 a. coating the connection area of said substrate with an
underfill,
b. dipping said chip into a tacky thermosettable flux so that
the connection bumps of said chip are coated with said flux,
c. placing said chip having said flux onto said substrate so
20 that the bumps of said chip are in contact with the pads of said
substrate,
d. soldering said chip to said substrate, and
e. curing said underfill.

12. The method of claim 11 wherein said steps a and b are reversed.

13. The method of claim 11 wherein said steps d and e are
5 conducted simultaneously.